

## CLAIMS

What is claimed is:

1. A vehicle driveline component comprising:  
a housing defining a chamber;  
a power transfer mechanism rotatably disposed within the housing, the power transfer mechanism including a shaft, wherein the shaft is rotatably mounted within the housing; and  
a wheel rotatably connected to the shaft having a leading surface and a trailing surface, wherein a duct is formed within the wheel, wherein the duct has an intersection with the leading surface and the trailing surface, and the duct is adapted to draw a fluid therethrough during rotation of the wheel.
2. The vehicle driveline assembly of Claim 1, wherein the wheel is positioned adjacent the axle assembly to direct air onto the outer surface of the housing.
3. The vehicle driveline assembly of Claim 1, wherein the power transfer mechanism is a differential assembly.
4. The vehicle driveline assembly of Claim 3, wherein the vehicle driveline component is an axle assembly.

5. The vehicle driveline assembly of Claim 1, wherein the wheel comprises a plurality of ducts formed therein.

6. The vehicle driveline assembly of Claim 1, wherein the duct is a NACA duct.

7. The vehicle driveline assembly of Claim 1, wherein the leading surface is generally annular.

8. The vehicle driveline assembly of Claim 1, wherein the trailing surface is generally annular.

9. The vehicle driveline assembly of Claim 1, wherein the intersection of the leading surface and the duct is generally triangular.

10. The vehicle driveline assembly of Claim 1, wherein the intersection of the leading surface and the duct is generally oval.

11. The vehicle driveline assembly of Claim 1, wherein the intersection of the trailing surface and the duct is generally rectangular.

12. The vehicle driveline assembly of Claim 1, wherein the intersection of the trailing surface and the duct is generally circular.

13. The vehicle driveline assembly of Claim 1, wherein a plane including the leading surface is generally perpendicular to an axis of the shaft.

14. An wheel comprising:  
  
a generally solid body bounded by an annular leading surface, an annular trailing surface, and an outer surface, wherein the leading surface and the trailing surface are generally parallel, the body having a central bore and a plurality of radially spaced apertures extending therethrough from the leading surface to the trailing surface wherein the central bore is adapted to restrain the wheel for rotation with a shaft and the radially spaced apertures are adapted to draw a fluid therethrough during said rotation.

15. The wheel of Claim 14, wherein a cross-sectional area of each duct, taken normal to the leading surface and intersecting a radius of the wheel, is variable as the radius is rotated along an arc defining the annular leading surface.

16. The method of Claim 14, wherein forming the wheel includes forming a plurality of variable area ducts therein.

17. The method of Claim 14, wherein forming the wheel includes forming a plurality of ducts therein, wherein the cross-sectional area of each duct, taken normal to the leading surface and intersecting a radial line of the wheel, is variable as the radial line is rotated within a plane defined by the leading surface.

18. The method of Claim 17, wherein each duct is configured to create a vacuum during said rotating.

19. The method of Claim 14, further comprising:  
directing the air onto a surface of the axle assembly.

20. The method of Claim 14, wherein rotating the wheel does not push air into an inlet of the wheel.